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ABSTRACT

The purposes of the present study were (1) to determine if there were significant differences in the divergent thinking ability of kindergarten children who engage in much fantasy play behavior as opposed to those who engage in little fantasy play behavior, and (2) to determine the effect of sex, socioeconomic status, and previous preschool group experience on children's fantasy play behavior. Forty-nine boys and 58 girls, enrolled in 18 kindergarten classrooms in a large suburban school, participated in the study. Fifty-two subjects came from middle socioeconomic status families and 55 from lower socioeconomic status families. Fifty-nine subjects had previous preschool experience and 50 had no such experience. Using the Fantasy Play Behavior Instrument (FPBI), designed by the author, subjects were observed for 5 minutes each day for a 10 day period and their involvement in fantasy play was recorded either as solitary (in which the child played alone) or as collaborative (in which the child took a role and related to one or more children while engaged in that role). The Product Improvement Subtest, Form B, of the Torrance Tests of Creative Thinking was used to obtain scores for the divergent thinking ability variables of fluency, flexibility, and originality. The study hypothesis, which indicated that children who scored in the upper quartile on the FPBI would have significantly more divergent creative thinking ability than children who scored in the lower quartile, was not supported. Instead, children who scored in the lower quartile on the FPBI were significantly higher in divergent thinking ability than those who scored in the upper quartile. In addition, sex, socioeconomic status, and previous preschool experience were found to have no significant main effects on children's fantasy play behavior. (Author/MP)

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THE RELATIONSHIP BETWEEN KINDERGARTEN CHILDREN'S FANTASY PLAY BEHAVIOR AND DIVERGENT THINKING ABILITY

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THE RELATIONSHIP BETWEEN KINDERGARTEN CHILDREN'S FANTASY PLAY BEHAVIOR AND DIVERGENT THINKING ABILITY

Though play is as old as recorded history, views of play are historically diverse (Lieberman, 1977). Even more controversial have been the views on the value of play. Recently play has been viewed by some theorists as a contributing factor to cognitive development (Piaget, 1962; Sutton-Smith, 1971). Both Piaget and Sutton-Smith have theorized links between fantasy play behavior and creative imagination or divergent thinking. However, Piaget theorized that as logical thought processes developed play disappeared, while Sutton-Smith contended that play becomes internalized.

Recent research has suggested that there is a correlation between make-believe or fantasy play and divergent thinking (Johnson, 1976). This relationship, however, needs more extensive investigation. The purposes of the present study were to determine if there were significant differences in the divergent thinking ability of kindergarten children who engage in much fantasy play behavior as opposed to those who engage in little fantasy play behavior and to determine the effect of sex, socioeconomic status, and previous preschool group experience on children's fantasy play behavior.

Data was collected from 18 kindergarten classrooms in a large suburban school district in the Southwest encompassing predominately Black school children of lower and middle socioeconomic status. Six pupils chosen randomly from each classroom

were included in the study (N=107). The sample included 49 males and 58 females, 52 subjects of middle socioeconomic status and 55 of lower socioeconomic status, and 57 subjects with previous preschool experience and 50 with no previous preschool experience.

Scores on total fantasy play behavior, solitary fantasy play behavior and collaborative fantasy play behavior were obtained through observation in the classroom using the Fantasy Play Behavior Instrument designed by the researcher for recording observations. Fantasy play for purposes of this study constituted play in which the child pretended an object was something other than what it was in real life or pretended that he or she was some other person, character, or object. Fantasy play was categorized as solitary, in which the child played alone, or collaborative, in which the child took a role and related to one or more children in the role. Children were observed for 5 minutes each day for a 10 day period by previously trained observers who achieved interrater reliability of .89 to .98. Observers recorded involvement in fantasy play, solitary or collaborative, or other activity for every 15 second interval.

The Product Improvement Subtest, Form B, of the Torrance Tests of Creative Thinking (Torrance, 1974) was used to obtain the divergent thinking scores of fluency, flexibility, and originality. Scores of children in the upper quartile in fantasy play behavior, solitary fantasy play behavior, and collaborative fantasy play behavior were compared to scores of children in the lower quartile on divergent thinking ability variables using the

multiple analysis of variance technique.

Though it was hypothesized that children who scored in the upper quartile on the Fantasy Play Behavior Instrument would have significantly more divergent creative thinking ability than children who scored in the lower quartile no significant differences in that direction were found. Instead children who scored in the lower quartile on the Fantasy Play Behavior Instrument were significantly higher in divergent thinking ability than those who scored in the upper quartile. The multivariate computer analysis reported an F-Ratio of 2.33 for 3 and 50 degrees of freedom.

A post hoc analysis was done to locate the differences on specific divergent thinking variables using the univariate and discriminant analysis of variance techniques (Finn, 1968). Significant differences were found on fluency ($p < .02$) and originality ($p < .001$) (see Table 1).

The multivariate analysis for the solitary fantasy play behavior means on the upper and lower quartiles indicated that the differences were not significant ($p < .08$) for the F-Ratio, 2.33 with 3 and 50 degrees of freedom. The analysis for collaborative fantasy play behavior also indicated no significant differences ($p < .06$) for the F-Ratio, 2.53. Though differences were not significant there was a trend for children in the lower quartiles in both solitary and collaborative fantasy play behavior to score higher in originality than those in the upper quartile.

In the 2 x 2 x 2 analysis of variance for unequal cells

Table 1

Univariate Analysis of Variance and Discriminant Analysis of Variance For Means on Divergent Thinking Variables for Upper and Lower Quartiles on Fantasy Play Behavior

Variable	Mean Square	Univariate F	Significance	Standardized Discriminant Coefficient
Fluency	104.17	5.43	.02	0.28
Flexibiility	0.17	0.06	.81	-0.50
Originality	416.67	11.18	.001	0.87

design with sex, socioeconomic status, and previous preschool experience, there were no significant main effects for fantasy play behavior, nor was there a significant three-way interaction. There was, however, one signficant two-way interaction ($p<.04$) between sex and previous preschool experience ($p<.04$) (see Table 2).

Several explanations may account for the results that children who scored in the lower quartile on fantasy play behavior were significantly different in fluency and originality as measures of divergent thinking. One explanation is that the lower quartile fantasy play children may be more mature in thought processes and may have already advanced to the decreased symbolic play behavior stage discussed by Piaget (1962). The subjects of the study were either nearing 6 years of age or were already 6 years of age. This age would be in the suggested age range of 2 to 7 years for symbolic play (Piaget, 1962). However, children who are in the upper age range and who are more mature in thought processes may have reached the maturity level characterized by another type of play behavior and thus would be involved in decreased symbolic play behavior.

The second explanation seems to be more appropriate because children who engaged in less fantasy play behavior were significantly higher in divergent thinking ability especially on the originality component. This explanation involves the contention that symbolic or fantasy play does not disappear but becomes internalized as creativity or divergent thinking ability with maturity (Sutton-Smith, 1971). It may be indeed that children in the fantasy play lower quartile may be more mature and may have

Table 2

Analysis of Variance for Means of Total Fantasy Play Behavior by Variables of Sex, Socioeconomic Status, and Previous Preschool Contact

Source of Variation	Sum of Squares	DF	Mean Square	F	Significance
Main Effects	4109.598	3	1369.866	0.784	0.50
Sex	1105.979	1	1105.979	0.633	0.42
*SES	1238.250	1	1238.250	0.709	0.40
*PRVSCHL	1958.900	1	1958.900	1.122	0.29
2-Way Interactions	13628.935	3	4542.978	2.601	0.05
Sex x SES	4076.531	1	4076.531	2.334	0.13
Sex x PREVSCHL	6971.946	1	6971.946	3.992	0.04
SES x PREVSCHL	2371.703	1	2371.703	1.358	0.24
3-Way Interactions	328.663	1	328.663	0.188	0.66
Sex x SES x PREVSCHL	328.663	1	328.663	0.188	0.66
Residual	172885.719	99	1746.320		
Total	190952.916	106	1801.443		

N = 107

*SES represents Socioeconomic Status, PREVSCHL represents Previous Preschool Group Contact

already internalized their fantasy play as divergent thinking ability.

A third explanation is that kindergarten socialization demands may be affecting the results of the study. The study was conducted in the spring of the year after the children had nearly one year of schooling. The kindergarten socialization process may relay the message to the maturing child that make-believe or fantasy play behavior is no longer acceptable behavior. Such an explanation is supported by Singer (1973) who noted a decrease in fantasy play from 6 to 8 years of age which he theorized resulted from demands of the socialization process. He believed that the "overt manifestations" of make-believe are "forced to go underground" (p. 200).

Both maturing thought processes and kindergarten socialization pressures may thus be responsible for channeling overt fantasy play behavior into covert creativity or divergent thinking. This study suggests that there is a probable transitional process in which overt fantasy play behavior is internalized as covert divergent thinking during the kindergarten year between the ages of 5 and 6. The extent to which the internalized divergent thinking is nourished in the school environment may determine if it survives or disappears (Garrett, 1976; Samples, 1977).

The significant two-way interaction between sex and previous preschool experience warrants discussion. Males who had previous preschool experience engaged in less fantasy play behavior than females who had previous preschool experience, while males who had no previous preschool contact engaged in more fantasy play

play behavior than females who had not had previous preschool contact. Evidently, the socialization process differs for males and females. Previous preschool contact is conducive to fantasy play behavior for females, but not for males. Perhaps, efforts directed toward males in the preschool are geared toward instructional type activities. The setting of the preschool with the traditional housekeeping corner may also encourage fantasy play behavior in females, but discourage this behavior in males. It appears that preschool activities may be biased toward feminine behavior.

Because a significant two-way interaction was found between previous preschool experience and sex in relationship to fantasy play behavior, a more thorough study is needed comparing groups which fall into the categories of males with previous preschool group contact, males with no previous preschool group contact, females with previous preschool group contact and females with no previous preschool contact. A study comparing these groups would be valuable both during the latter part of the preschool expierience and during the kindergarten experience. Results of this study also suggest that more extensive study needs to be done at the kindergarten level to determine the influence of the kindergarten environment and curriculum on fantasy play and divergent thinking ability.

References

Finn, J. Multivariance . . . Univariate and multivariate analysis of variance, covariance, and regression: A fortran IV program. Buffalo, New York: State University Faculty of Educational Studies, 1968.

Garrett, S. V. Putting our whole brain to use: A fresh look at the creative process. Journal of Creative Behavior, 1976, 10, 239-249.

Johnson, J. E. Relations of divergent thinking and intelligence test scores with social and nonsocial make-believe play of preschool children. Child Development, 1976, 47, 2100-2103.

Lieberman, J. N. Playfulness: Its relationship to imagination and creativity. New York: Academic Press, 1977.

Piaget, J. Play, dreams and imitation in children. New York: Norton, 1962.

Samples, B. Mind cycles and learning. Phi Delta Kappan, 1977, 58, 688-692.

Singer, J. The child's world of make-believe. New York Academic Press, 1973.

Sutton-Smith, B. The role of play in cognitive development. In B. Sutton-Smith (Ed.), Child's Play. New York: Wiley, 1971.

Torrance, E. P. Torrance tests of creative thinking: Norms technical manual. Princeton, New Jersey: Personnel Press, 1974.